

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-9 (Cancelled):

Claim 10 (New): A data-randomizing method for an optical disk apparatus adapted to record data on recording medium by light, and read data on the recording medium by utilizing a difference in reflectance, comprising:

adding seed data for randomizing, to data to be recorded on the recording medium, and

determining at least one bit randomized data by operating at least one bit data added seed data to the data and multiple bit randomized data,

wherein the different value of seed data is used as seed data in every time of rewriting data.

Claim 11 (New): A decoding method for randomizing data used in an optical disk reading apparatus adapted to read randomized data by the method according to claim 10, determining one-bit de-randomized data by operation using multiple bit randomized data.

Claim 12 (New): An optical disk recording medium for recording data by light, and enabling reading data recorded thereon by utilizing a difference in reflectance, in which data is randomized and written thereon by:

adding seed data for randomizing data, to data to be recorded on the optical recording medium; and

determining at least one-bit randomized data by operation using at least one-bit data to be added by seed data to the data and multiple-bit randomized data,

wherein the seed data is data which is produced by using a different value in every time of rewriting data.

Claim 13 (New): An optical disk apparatus using the data-randomizing method according to claim 10, wherein data recorded on the recording medium is data recorded by adding error corrected code after randomizing by the data-randomizing method.

Claim 14 (New): An optical disk apparatus for reading data recorded by using the method data-randomizing according to claim 10, wherein the data which is added by error correction code to be read from the recording medium is de-randomized data after error correction.

Claim 15 (New): A data-randomizing method for an optical disk apparatus adapted to record data on recording medium by light, and read the data on the recording medium by utilizing a difference in reflectance, adding randomized data based on seed data to user data by performing exclusive OR operation of first data randomizing method to produce first randomized data, which is randomized by the second data-randomizing method according to claim 1.

Claim 16 (New): A data-randomizing method according to claim 10, wherein data is randomized in every fixed unit, and data of a fixed unit contains address identification information including at least ID, user data, and an error detection code.

Claim 17 (New): A data-randomizing method according to claim 10, wherein data is randomized in every fixed unit, and data of a fixed unit contains seed data, address identification information including at least ID, user data, and an error detection code.

Claim 18 (New): A data-randomizing method according to claim 10, wherein data is randomized in every fixed unit for recording, and seed data is placed in front of a synchronous signal.

Claim 19 (New): An optical disk apparatus according to claim 13, wherein an order of data arrangement for data randomizing is similar to an order of an error correction code word for decoding.

Claim 20 (New): An optical disk apparatus using the data-randomizing method according to claim 10, wherein data recorded on the recording medium is recorded by adding an error correction code, data-randomization is performed after the error correction coding, and an order of data arrangement for data randomizing is similar to an order of recording data on the recording medium.